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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
09/825,611	04/03/2001	Sujit Sharan	95-0716.02	3508

7590 09/16/2005

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EXAMINER
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PERT, EVAN T

ART UNIT	PAPER NUMBER
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2826

DATE MAILED: 09/16/2005

Please find below and/or attached an Office communication concerning this application or proceeding.

<b>Office Action Summary</b>	<b>Application No.</b>	<b>Applicant(s)</b>	
	09/825,611	SHARAN ET AL. 	
	<b>Examiner</b>	<b>Art Unit</b>	
	Evan Pert	2826	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

### Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

### Status

- 1) ☒ Responsive to communication(s) filed on 01 June 2005.
- 2a) ☐ This action is **FINAL**.                      2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

### Disposition of Claims

- 4) ☒ Claim(s) 37-39 is/are pending in the application.
- 4a) Of the above claim(s) \_\_\_\_\_ is/are withdrawn from consideration.
- 5) ☐ Claim(s) \_\_\_\_\_ is/are allowed.
- 6) ☒ Claim(s) 37-39 is/are rejected.
- 7) ☐ Claim(s) \_\_\_\_\_ is/are objected to.
- 8) ☐ Claim(s) \_\_\_\_\_ are subject to restriction and/or election requirement.

### Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on \_\_\_\_\_ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.  
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).  
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

### Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All    b) ☐ Some \*    c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
  2. ☐ Certified copies of the priority documents have been received in Application No. \_\_\_\_\_.
  3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

\* See the attached detailed Office action for a list of the certified copies not received.

### Attachment(s)

- |   |   |
|---|---|
| 1) <input checked="" type="checkbox"/> Notice of References Cited (PTO-892)             | 4) <input type="checkbox"/> Interview Summary (PTO-413)                     |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948)    | Paper No(s)/Mail Date. _____  |
| 3) <input type="checkbox"/> Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08) | 5) <input type="checkbox"/> Notice of Informal Patent Application (PTO-152) |
| Paper No(s)/Mail Date _____   | 6) <input type="checkbox"/> Other: _____                                    |

### DETAILED ACTION

1. In view of the Brief on Appeal filed June 1, 2005, PROSECUTION IS HEREBY REOPENED. New grounds of rejection are set forth below.

To avoid abandonment of the application, appellant must exercise one of the following two options:

(1) file a reply under **37 CFR 1.111** (if this Office action is non-final) or a reply under **37 CFR 1.113** (if this Office action is final); or,

(2) request reinstatement of the appeal.

If reinstatement of the appeal is requested, such request must be accompanied by a supplemental appeal brief, but no new amendments, affidavits ( **37 CFR 1.130**, **1.131** or **1.132**) or other evidence are permitted. See **37 CFR 1.193(b)(2)**.

#### ***Claim Rejections - 35 USC § 102***

2. The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(a) the invention was known or used by others in this country, or patented or described in a printed publication in this or a foreign country, before the invention thereof by the applicant for a patent.

(e) the invention was described in (1) an application for patent, published under section 122(b), by another filed in the United States before the invention by the applicant for patent or (2) a patent granted on an application for patent by another filed in the United States before the invention by the applicant for patent, except that an international application filed under the treaty defined in section 351(a) shall have the effects for purposes of this subsection of an application filed in the United States only if the international application designated the United States and was published under Article 21(2) of such treaty in the English language.

3. Claims 37-39 are rejected under 35 U.S.C. 102(a) or, alternatively, under 35 USC 102(e), as being anticipated by Tobe et al. (US 5,855,685):

The Tobe et al. reference anticipates genus claim 37

Regarding claim 37, the Tobe et al. reference discloses an example of an atmosphere for a chemical vapor deposition process (i.e. in a PECVD chamber, an atmosphere *consisting* of “titanium tetrachloride”, “hydrogen” and “argon” per col. 9, line 52 to col. 10, line 17), comprising: a deposition gas having chemical reactivity (i.e. “titanium tetrachloride” which is the example of applicant’s written description); and a chemically inert reactivity increaser (i.e. “argon” which is the example of applicant’s written description) mixed with said deposition gas [i.e. mixed in the PECVD chamber per col. 9, lines 53-67, to form a titanium film].

Claim Terminology

Applicant places emphasis on the term “reactivity increaser” which does not even appear in applicant’s specification (yet is presumed to be equivalent to “reaction promoter gas” of the written description). A search of [www.Google.com](http://www.Google.com) doesn’t help define scope of “reactivity increaser” either, and the patent system databases are silent about this term as well (0 hits on 9-12-05). Of course, applicant may establish unique terms for what are believed to be unique ideas in a patent application:

Applicant’s single example of “depositing titanium” by “PECVD” establishes what a “reactivity increaser” *certainly* includes: A “reactivity increaser” (i.e. reaction promoter), as defined by applicant’s written description, includes, in its scope, “argon” when the “argon” is mixed in a PECVD atmosphere solely with “titanium tetrachloride” and “hydrogen” in order to deposit a film of “titanium” (see [0012], [0014], and [0027] through [0034], which outline the single example in support of the claimed genus).

Applicant explains at [0034] that the use of “argon” in the instantly claimed invention is “not like the prior art” where the applicant-coined term “reactability increaser” would not apply.

Therefore, in view of a careful adherence to applicant’s written description, one way for “argon” to definitively be a “reactability increaser” is for the “argon” to be used just like applicant’s lone example (i.e. in a PECVD atmosphere solely with “hydrogen” and “titanium tetrachloride” to deposit a “film of titanium” wherein the argon is not used as a “dilutent” per [0034], and is preferably “flowed at a rate percentage of at least 40%” per [0027]).

Why is “argon” a “reactability increaser” in the Tobe et al. reference?

The “argon” in the Tobe et al. reference is a “third precursor” and is supplied in accordance with applicant’s written description at 44%, which is within the “preferred at least 40%” of applicant’s [0027].

Applicant’s lone example of a process supporting claims 37-39 is the same process as the Tobe et al. reference (i.e. PECVD) with the same 3 gases (i.e.  $\text{TiCl}_4$ ,  $\text{H}_2$  and Ar), meeting the preferred criteria of argon flow rate percentage of “at least 40%” (i.e. 44%): Accordingly, if applicant were to argue that the argon in Tobe et al. reference is not a “reactability increaser,” claims 37-39, as they stand, even if allowed, would not be enforceable.

Claims 38 and 39

Regarding claims 38 and 39, the deposition gas in the example of the Tobe et al. reference is a metal film (i.e. a metal titanium film per col. 9, lines 64-65) precursor gas (i.e. "titanium tetrachloride" is the "first precursor gas" per col. 9, lines 53-54).

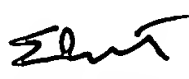
**Conclusion**

4. Any inquiry concerning this communication or earlier communications from the examiner should be directed to Evan Pert whose telephone number is 571-272-1969. The examiner can normally be reached on M-F (7:30AM-3:30 PM).

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Nathan Flynn can be reached on 571-272-1915. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

ETP  
September 12, 2005

  
EVAN PERT  
PRIMARY EXAMINER